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10/780,855	02/19/2004	Jason E. Zirk	P57000	2464

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EXAMINER	
HAN, JASON	

ART UNIT	PAPER NUMBER
2875	

DATE MAILED: 01/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/780,855	ZIRK ET AL.	
	Examiner	Art Unit	
	Jason M Han	2875	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 February 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-29* is/are rejected.

7)☒ Claim(s) *2,20,22 and 26* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *19 February 2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *2/19/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: lens (102) [Figure 5A; Page 7, Line 17]. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities:

   a. Page 7, Line 13: Typographical error – "A illiminator" should read "An illuminator";

   b. Page 7, Line 14: Typographical error – "reflector.103";

   c. Page 9, Paragraph 33: reference should be made to Figure 8 to elucidate the specification;

   d. Page 11, Line 1: Typographical error – "and electrically OFF" should read "an electrically OFF";

e. Page 12, Line 2: Grammatical error – "its'" should read "its";

Appropriate correction is required.

Claim Objections

3. Claim 2 is objected to because of the following informalities: Typographical error – Applicant should use consistent language throughout the disclosure, wherein line 2 of the claim recites a "blade-switch" that was mentioned in Claim 1 as a "blade switch". Appropriate correction is required.

4. Claim 20 is objected to because of the following informalities: Applicant recites the limitation "said conductive plate". There is insufficient antecedent basis for this limitation in the claim. Appropriate correction is required.

5. Claim 22 is objected to because of the following informalities: Typographical error – "MILEs" should read as "MILES", which is an acronym for "Multiple Integrated Laser Engagement System." Appropriate correction is required.

6. Claim 26 is objected to because of the following informalities: Applicant recites the limitation "said switchblade mechanism". There is insufficient antecedent basis for this limitation in the claim. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 16 and 19-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. Claim 16 recites the limitation "first electrical switch" in line 3 of the claim. There is insufficient antecedent basis for this limitation in the claim. The above limitation fails to clearly identify applicant's invention, and the below rejection has been based on the best interpretation deemed possible by the examiner.

9. Claim 19 recites the limitation "momentary on switch" in lines 1-3 of the claim, as well as a "momentary apply electrical power" in line 5 of the claim. There is insufficient antecedent basis for these limitations in the claim. Claim 20 is rejected due to dependency. The below rejections have been based on the best interpretation deemed possible by the examiner.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1-6 and 17 are rejected under 35 U.S.C. 102(b) as being aniticipated by Leu (U.S. Patent 4918775).

11. With regards to Claim 1, Leu discloses an illumination tool including:

- a tool [Figure 2: (61-66)];
- a housing encasing the tool while the tool is in an inoperative position and providing a handle when the tool is in a deployed position [Figure 2: (1, 2, 5)];
- an illuminating component [Figure 2: (34)] mounted on the housing to illuminate the tool while the tool is in the deployed position;

- a mode switch component [Figure 2: (14)]; and
- a blade switch component [Figure 2: (6, 61)] cooperating with the mode switch, housing, and illuminating components to operate the illuminating component.

12. With regards to Claim 2, Leu discloses the housing [Figure 2: (1, 2, 5)] wherein the handle accommodates the mode switch component [Figure 2: (14)], at least one blade switch component [Figure 2: (6, 61)], and at least one illuminating component [Figure 2: (34)].

13. With regards to Claim 3, Leu discloses the housing component including at least one storage volume [Figure 2: (3)].

14. With regards to Claim 4, Leu discloses the housing component including at least one scale [Figure 2: (61, 64, 66)], defined as the longitudinal sides of the blades, and at least one axle [Figure 2: (6)] providing a pivot of rotation so that the tool mat move between the inoperative and deployed positions.

15. With regards to Claim 5, Leu discloses the housing component including at least one port for accommodating removable storage of any of a variety of tools [Figure 2: (61-66)].

16. With regards to Claim 6, Leu discloses the illumination tool including at least one extra tool removable stored within the housing [Figure 2: (61-66)].

17. With regards to Claim 17, Leu discloses the mode switch component and blade switch component including a switch assembly [Figure 2: (14)] that is disposed at one end of the housing component, whereby it is switched by manipulation of a user to an

off position with no power supplied to the illuminating component when said tool is in the inoperative position and can be switched on when in the deployed position [Column 2, Lines 1-4].

18. Claims 28 is rejected under 35 U.S.C. 102(b) as being aniticipated by Myerchin et al. (U.S. Patent 5727319).

Myerchin discloses a folding knife light with a power source including a removable cell [Figure 3: (54); Column 3, Lines 27-31].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

19. Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leu (U.S. Patent 4918775) as applied to Claim 1 above, and further in view of Breen (U.S. Patent 5845986).

20. With regards to Claim 7, Leu discloses the claimed invention as cited above, but does not specifically teach the illuminating component including at least one light emitting diode, at least one lens, and at least one reflector.

Breen teaches an illuminated tool device including at least one light emitting diode [Figure 2: (16); Column 3, Lines 10-13]. In addition, Breen teaches, "In some embodiments of the present invention, it may be desirable to further provide the device with a lens means or a reflectance means, or a combination of the two, secured to the

body and radially extending outwardly therefrom [Column 4, Lines 19-22; underlines added by examiner for emphasis]."

It would have been obvious to modify the illumination tool of Leu to incorporate the light emitting diode, lens and reflector of Breen in order to provide a strong and efficient emitted light for the tool's application area, whereby LEDs are commonly known to have a small size, low power consumption, intense light, long life, and low cost [Breen: Column 3, Lines 7-13], and further whereby a lens and reflector is commonly known to optically enhance a light source [Breen: see last sentence of Abstract].

21. With regards to Claim 8, Leu in view of Breen discloses the claimed invention as cited above. In addition, Breen teaches the illuminating component including at least one light bulb [Figure 2: (16)].

22. With regards to Claim 9, Leu in view of Breen discloses the claimed invention as cited above. In addition, Breen teaches the illuminating component including a pair of light bulbs [Figure 2: (16)], whereby one bulb is disposed on each side of a tool [Figure 2: (106)].

23. Claims 10, 14-16, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leu (U.S. Patent 4918775) as applied to Claim 1 above, and further in view of Chen (U.S. Patent 6434829).

24. With regards to Claim 10, Leu discloses the claimed invention as cited above, but does not specifically teach the blade switch component including a first electrical switch in the handle, whereby the switch is activated by movement of the tool between the inoperative position and the deployed position.

Chen teaches a knife including a light-emitting member [Figures 1-5: (22)], whereby a blade switch component [Figures 1-5: (101)] includes a first electrical switch [Figures 105: (23)] that is activated by movement of the tool/knife between an inoperative position and a deployed position [see Abstract].

It would have been obvious to modify the illumination tool of Leu to incorporate the automatic light feature of Chen in order to accommodate a user with greater flexibility and ease of use in dark environments. Such a configuration is commonly known, whereby it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the automatic feature, since it has been held that broadly providing a mechanical or automatic means to replace manual activity which has accomplished the same result involves only routine skill in the art. *In re Venner*, 120 USPQ 192.

25. With regards to Claim 14, Leu in view of Chen discloses the claimed invention as cited above. In addition, Leu teaches a switch that is disposed to accommodate manual operation by a thumb of a user when the tool is in the inoperative position [Figure 1: (14)].

26. With regards to Claim 15, Leu in of view of Chen discloses the claimed invention as cited above. In addition, Chen teaches the first electrical switch mounted to a housing with operational disposition that is switched to an off position by a heel of the tool when in the inoperative position [Figure 4: (101)].

27. With regards to Claim 16, Leu in view of Chen discloses the claimed invention as cited above. In addition, both Leu [Figure 2: (33, 35)] and Chen [Figures 1-5: (21)]

teach an electrical battery with electrical conductors that electrically connect the battery to the illuminating component via the switches.

28. With regards to Claim 18, Leu in view of Chen discloses the claimed invention as cited above. In addition, Chen teaches the first electrical switch including a conductive plate [Figures 2&4: (101)] fixed to the tool so that it comes into contact with a stud affixed to the handle [Figures 2-4: (23)] to complete an electrical connection from the illuminating component to switch when the blade is in the deployed position.

29. Claims 11-13 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Leu (U.S. Patent 4918775) in view of Chen (U.S. Patent 6434829) as applied to Claim 10 above, and further in view of Lemoine (U.S. Patent 6206538).

30. With regards to Claim 11, Leu in view of Chen discloses the claimed invention as cited above, but does not specifically teach the mode switch including an off mode for the illuminating component, an on mode wherein the illuminating component operates independently of the position of the tool, and an on-by-blade/automatic mode wherein electrical power is supplied to the first electrical switch to operate the illuminating component when the blade is in an open position.

Lemoine teaches a tool including a mode switch with three modes [Figure 1: (4)], wherein:

- an off mode [Figure 1: (1)] prevents electrical power to be supplied to a light source;
- an on mode provides illumination independent of the operation of the tool [Figure 1: (2)]; and

- an automatic mode whereby electrical power is supplied to the light source when the tool is in operating mode [Figure 1: (3)].

It would have been obvious to modify the illumination tool of Leu with the automatic light feature of Chen to further incorporate the mode switch of Lemoine in order to provide a user with greater flexibility with respect to the light source and operation of the tool, whereby a user may have the option of using the light or not independent of tool operation, and vice versa. Such a configuration is commonly known, suggested, and corroborated by Lemoine, wherein, "The invention is, however, easily adapted to and may be readily incorporated in other types of tool operating switches, such as, but not limited to, toggle switches, push button switches, multiple pole switches, plunger switches, knife switches and the like [Column 2, Lines 6-11; underline added by the examiner for emphasis]."

31. With regards to Claim 12, Leu in view of Chen, and further in view of Lemoine discloses the claimed invention as cited above except for the mode switch comprising a single pole, double throw, center off switch. It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate said single pole, double through, center off switch, since it has been held that rearranging parts of an invention involves only routine skill in the art. *In re Japiske*, 86 USPQ 70. In this case, mere rearrangement of the switch in terms of operating position is an obvious matter of design wherein the electrical circuit may be easily modified to incorporate a central off position, one extreme being an on position, and another extreme being an automatic on position.

32. With regards to Claim 13, Leu in view of Chen, and further in view of Lemoine discloses the claimed invention as cited above. In addition, Chen teaches the first electrical switch being switched on by a heel of the tool [Figures 1-5: (101)] when the tool moves to the deployed position.

33. With regards to Claim 19, Leu in view of Chen, and further in view of Lemoine discloses the claimed invention as cited above. In addition, Lemoine teaches a switch [Figure 1: (4)], wherein the switch provides an off position when the tool is inoperative [Figure 1: (1)] and an on position [Figure 1: (2)] for an illuminating component [Figure 1: (6)] independent of tool operation/position.

34. With regards to Claim 20, Leu in view of Chen, and further in view of Lemoine discloses the claimed invention except for a non-conductive washer under the conductive plate so as to prevent electrical contact between the illuminating component and the mode switch when the blade is in a closed position. It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate a non-conductive washer, since it has been held to be within general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416. In this case, a non-conductive material between the conductor and switch would be an obvious engineering decision to prevent electrical communication.

35. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Leu (U.S. Patent 4918775) in view of Chen (U.S. Patent 6434829) as applied to Claim 1 above, and further in view of Dayan (U.S. Patent 6765496).

Leu in view of Chen discloses the claimed invention as cited above, but does not specifically teach the mode switch and the blade switch further including a momentary switch having a dimming function and a color switching function for the illuminating component.

Dayan teaches, "Controller switch 20 of controller 10 provides the user with various modes of operation. In this case, three options are shown. If the user selects `light` option 20a, the light source (not shown) may always be turned on when controller 10 is on. If the user chooses `off` option 20b, the light source will not be illuminated in response to the audible signal. If the user selects `flash` 20c, then the light source may flash or change visually in response to the audible signal. Different visual effects of the light source are possible, including, but not limited to flashing or pulsing on and off, dimming and brightening, and changing color [Column 4, Lines 7-18; underlines added by examiner for emphasis]."

It would have been obvious to modify the illumination tool of Leu with the automatic light feature of Chen to further incorporate the dimming and color switching functions of Dayan to provide greater control of the illumination to a user's desired preference. Such a configuration is commonly known within the art and provides a user with more options, which almost always appeals to consumers.

36. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor, Jr. (U.S. Patent 5331741) in view of Leu (U.S. Patent 4918775), and further in view of Campagnuolo (U.S. Patent 5474452).

Taylor discloses a folding knife including:

- a housing [Figure 4: (15, 19)] enclosing a knife [Figure 4: (12)];
- a switchblade pushbutton [Figure 4: (13)] for deploying the blade; and
- an ergonomic handle with a hammer head at a blade end [Figure 4: on the side where (21) is inserted].

Taylor does not specifically teach the folding knife having an illuminating means, a toggle switch for turning on the illuminating means, a mode switch, and a power supply package.

Leu teaches an illumination tool/knife including an illuminating means [Figure 2: (34)], a toggle switch [Figure 2: (14)] for turning on the illuminating means, a mode switch [Figure 2: (4)] for selecting a mode of operation of the illumination tool, and a power supply package [Figure 2: (3); Column 2, Lines 5-6].

Neither Taylor nor Leu teaches the folding knife including a laser light package, a sonic alarm cooperating with the toggle switch, and an RF package cooperating with a MILES type training system.

Campagnuolo teaches a training simulation system, "Briefly, the MILES system uses laser bullets in combination with laser sensitive detectors to simulate the lethality and realism of the modern tactical battlefield. Eye-safe Gallium Arsenide (GaAs) laser transmitters, capable of shooting pulses of coded infrared energy, simulate the effects of live ammunition. The transmitters are easily attached to and removed from all hand-carried and vehicle-mounted direct-fire weapons. Detectors located on opposing force troops, vehicles, and other point targets receive the coded laser pulses. MILES decoders then determine whether the target was hit by a weapon that could cause

damage in a hierarchy of weapons effects and whether the laser bullet was accurate enough to cause a casualty. The target vehicles or troops are made instantly aware of the accuracy of the simulated shot by means of audio alarms and visual displays, which can indicate either a hit or a near miss [Column 1, Lines 36-51; underlines added by examiner for emphasis]." In addition, Miles further teaches, "In presently existing military training environments, indirect fire from mortars, artillery, and the like non-directional weapons are often simulated by physically placing devices in the battle area. These devices at the pre-planned time for artillery/mortar fire are hand-placed into the area and referees decide which soldiers or vehicles in the battle are eliminated. More advanced systems, such as the one described in U.S. Pat. No. 4,744,761 to Doerfel et al., propose to inject timed RF signals into the battle zone, so soldiers or vehicles exposed to the RF signal will be "eliminated" through activation of their MILES II system. The MILES II system differs from the MILES system in that it also interacts with RF signals [Column 2, Lines 10-23; underlines added by examiner for emphasis]."

It would have been obvious to modify the folding knife of Taylor to incorporate the illumination means of Leu in order to provide a user greater flexibility and ease of use in dark environments. It would then have been further advantageous and obvious to modify the folding knife of Taylor with the illumination means of Leu to incorporate the training simulation system of Campagnuolo to better train soldiers, who commonly carry knives/weapons on the battlefield.

37. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor, Jr. (U.S. Patent 5331741) in view of Leu (U.S. Patent 4918775), and further in view of Campagnuolo (U.S. Patent 5474452).

Taylor discloses a folding knife including:

- a housing [Figure 4: (15, 19)] enclosing a knife [Figure 4: (12)];
- a switchblade pushbutton [Figure 4: (13)] for deploying the blade; and
- an ergonomic handle with a hammer head at a blade end [Figure 4: on the side where (21) is inserted].

Taylor does not specifically teach the folding knife having an illuminating means, a momentary on switch for turning on the illuminating means, a mode switch, and a power supply package.

Leu teaches an illumination tool/knife including an illuminating means [Figure 2: (34)], a momentary on switch [Figure 2: (14)] for turning on the illuminating means, a mode switch [Figure 2: (4)] for selecting a mode of operation of the illumination tool, and a power supply package [Figure 2: (3); Column 2, Lines 5-6].

Neither Taylor nor Leu teaches the folding knife including an RF package cooperating with a MILES type training system.

Campagnuolo teaches a training simulation system, "In presently existing military training environments, indirect fire from mortars, artillery, and the like non-directional weapons are often simulated by physically placing devices in the battle area. These devices at the pre-planned time for artillery/mortar fire are hand-placed into the area and referees decide which soldiers or vehicles in the battle are eliminated. More

advanced systems, such as the one described in U.S. Pat. No. 4,744,761 to Doerfel et al., propose to inject timed RF signals into the battle zone, so soldiers or vehicles exposed to the RF signal will be "eliminated" through activation of their MILES II system. The MILES II system differs from the MILES system in that it also interacts with RF signals [Column 2, Lines 10-23; underlines added by examiner for emphasis]."

It would have been obvious to modify the folding knife of Taylor to incorporate the illumination means of Leu in order to provide a user greater flexibility and ease of use in dark environments. It would then have been further advantageous and obvious to modify the folding knife of Taylor with the illumination means of Leu to incorporate the training simulation system of Campagnuolo to better train soldiers, who commonly carry knives/weapons on the battlefield.

38. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Taylor, Jr. (U.S. Patent 5331741) in view of Leu (U.S. Patent 4918775).

Taylor discloses a folding knife including:

- a housing [Figure 4: (15, 19)] enclosing a knife [Figure 4: (12)];
- a switchblade pushbutton [Figure 4: (13)] for deploying the blade; and
- an ergonomic handle with a hammer head at a blade end [Figure 4: on the side where (21) is inserted].

Taylor does not specifically teach the folding knife having an illuminating means, a momentary on switch for turning on the illuminating means, a mode switch, and a power supply package.

Leu teaches an illumination tool/knife including an illuminating means [Figure 2: (34)], a momentary on switch [Figure 2: (14)] for turning on the illuminating means, a mode switch [Figure 2: (4)] for selecting a mode of operation of the illumination tool, and a power supply package [Figure 2: (3); Column 2, Lines 5-6].

It would have been obvious to modify the folding knife of Taylor to incorporate the illumination means of Leu in order to provide a user greater flexibility and ease of use in dark environments.

39. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Leu (U.S. Patent 4918775) in view of Chen (U.S. Patent 6434829) and further in view of Dayan (U.S. Patent 6765496) as applied to Claim 21 above, and further in view of Campagnuolo (U.S. Patent 5474452).

Leu in view Chen and further in view of Dayan discloses the claimed invention as cited above, but does not specifically teach the illumination tool/knife including a laser light package, a sonic alarm, and an RF package cooperating with a MILES training system.

Campagnuolo teaches a training simulation system, "Briefly, the MILES system uses laser bullets in combination with laser sensitive detectors to simulate the lethality and realism of the modern tactical battlefield. Eye-safe Gallium Arsenide (GaAs) laser transmitters, capable of shooting pulses of coded infrared energy, simulate the effects of live ammunition. The transmitters are easily attached to and removed from all hand-carried and vehicle-mounted direct-fire weapons. Detectors located on opposing force troops, vehicles, and other point targets receive the coded laser pulses. MILES

decoders then determine whether the target was hit by a weapon that could cause damage in a hierarchy of weapons effects and whether the laser bullet was accurate enough to cause a casualty. The target vehicles or troops are made instantly aware of the accuracy of the simulated shot by means of audio alarms and visual displays, which can indicate either a hit or a near miss [Column 1, Lines 36-51; underlines added by examiner for emphasis]." In addition, Miles further teaches, "In presently existing military training environments, indirect fire from mortars, artillery, and the like non-directional weapons are often simulated by physically placing devices in the battle area. These devices at the pre-planned time for artillery/mortar fire are hand-placed into the area and referees decide which soldiers or vehicles in the battle are eliminated. More advanced systems, such as the one described in U.S. Pat. No. 4,744,761 to Doerfel et al., propose to inject timed RF signals into the battle zone, so soldiers or vehicles exposed to the RF signal will be "eliminated" through activation of their MILES II system. The MILES II system differs from the MILES system in that it also interacts with RF signals [Column 2, Lines 10-23; underlines added by examiner for emphasis]."

It would have been obvious to modify the illumination tool of Leu with the automatic light feature of Chen and the dimming and color switching functions of Dayan to further incorporate the training simulation system of Campagnuolo to better train soldiers, who commonly carry knives/weapons on the battlefield.

40. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Leu (U.S. Patent 4918775) in view of Chen (U.S. Patent 6434829) and further in view of

Dayan (U.S. Patent 6765496) as applied to Claim 21 above, and further in view of Taylor, Jr. (U.S. Patent 5331741).

Leu in view of Chen and further in view of Dayan discloses the claimed invention as cited above, but does not specifically teach the illumination tool/knife including a switch blade mechanism utilizing a pushbutton.

Taylor teaches a folding knife including a switchblade pushbutton [Figure 4: (13)] for deploying the blade.

It would have been obvious to modify the illumination tool of Leu with the automatic light feature of Chen and the dimming and color switching functions of Dayan to further incorporate the switchblade pushbutton of Taylor in order to provide a user a quick, simple, and automatic means for deploying a knife blade/tool. It has also been held that broadly providing a mechanical or automatic means to replace manual activity which has accomplished the same result involves only routine skill in the art. *In re Venner*, 120 USPQ 192.

41. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Leu (U.S. Patent 4918775) in view of Chen (U.S. Patent 6434829), Taylor, Jr. (U.S. Patent 5331741), and further in view of .

Leu discloses a folding knife light including a housing [Figure 2: (1, 2, 5)] and an illuminating component [Figure 2: (34)] that lights a blade tip area [Figure 2: (61)]. In addition, Leu teaches a switch [Figure 2: (14)] that permits the illuminating means to be either on or off under all conditions, but does not specifically teach an automatic light

feature that illuminates the tip area when the folding knife is opened or in a deployed position.

Chen teaches a knife including a light-emitting member [Figures 1-5: (22)], whereby a blade switch component [Figures 1-5: (101)] includes an electrical switch [Figures 105: (23)], wherein the illuminating means is toggled on momentarily depending on the blade position, e.g. inoperative or open/deployed dispositions [see Abstract].

Neither Leu nor Chen specifically teaches a quick-release blade mechanism.

Taylor teaches such a folding knife including a quick-release switchblade pushbutton [Figure 4: (13)] for deploying the knife.

It would have been obvious to modify the folding knife light of Leu to incorporate the automatic light feature of Chen in order to accommodate a user with greater flexibility and ease of use in dark environments. It would then have been further advantageous and obvious to modify the folding knife light of Leu with the automatic light feature of Chen to incorporate the quick-release mechanism of Taylor in order to provide a user a quick, simple, and automatic means for deploying a knife blade/tool. Such configurations are commonly known and obvious engineering designs, whereby it has been held that broadly providing a mechanical or automatic means to replace manual activity which has accomplished the same result involves only routine skill in the art. *In re Venner*, 120 USPQ 192.

42. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Leu (U.S. Patent 4918775) in view of Chen (U.S. Patent 6434829).

Leu discloses an illumination tool providing:

- a tool [Figure 2: (61-66)] to rotate about an axle [Figure 2: (6)] within a housing [Figure 2: (1, 2, 5)] encasing the tool while in an inoperative position or acting as a handle while the tool is in a deployed position;
- an illuminating component [Figure 2: (34)] on the housing to light the tool when in the deployed position; and
- a mode switch component [Figure 2: (14)].

Leu does not specifically teach providing a blade switch component electrically connected that operationally cooperates with the mode switch, housing, and illuminating components.

Chen teaches a knife providing a light-emitting member [Figures 1-5: (22)], whereby a blade switch component [Figures 1-5: (101)] includes a first electrical switch [Figures 105: (23)] that is activated by movement of the tool/knife between an inoperative position and a deployed position [see Abstract].

It would have been obvious to modify the illumination tool of Leu to incorporate the automatic light feature of Chen in order to accommodate a user with greater flexibility and ease of use in dark environments. Such a configuration is commonly known, whereby it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the automatic feature, since it has been held that broadly providing a mechanical or automatic means to replace manual activity which has accomplished the same result involves only routine skill in the art. *In re Venner*, 120 USPQ 192.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following references are cited to further show the state of the art pertinent to the current application, but are not considered exhaustive:

US Patent 2599419 to Stark;

US Patent 2705279 to Belinger;

US Patent 4364104 to Holahan et al;

US Patent 4669186 to Liu;

US Patent 5083246 to Lambert;

US Patent 5168780 to Van Gennep;

US Patent 5169225 to Palm;

US Patent 5199874 to Campangnuolo et al;

US Patent 5313376 to McIntosh;

US Patent 5402575 to Maxcy;

US Patent 5442529 to Hoover;

US Patent 5467256 to Chen;

US Patent 5588732 to Sasaki et al;

US Patent 5626414 to Chen;

US Patent 5652587 to Liu;

US Patent 5653525 to Park;

US Patent 5878500 to Emerson;

US Patent 5947789 to Chan;

US Patent 6027224 to Schnell;

US Patent 6041505 to Chen;

US Patent 6142769 to Walker;

US Patent 6145994 to Ng;

US Patent 6273582 to Taggart et al;

US Publication 2001/0040801 to Krietzman et al;

US Patent 6394634 to Kitchin;

US Publciation 2002/0071270 to Lam;

US Publication 2002/0075673 to Phelps;

US Patent 6446341 to Wang et al;

US Publication 2003/0223224 to Painsith et al;

US Publication 2004/0016058 to Gardiner et al;

US Patent 6744223 to Laflamme et al;

US Patent 6749318 to Palacios;

US Patent6761470 to Sid;

US Patent 6787999 to Stimac et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason M Han whose telephone number is (571) 272-2207. The examiner can normally be reached on 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (571) 272-2378. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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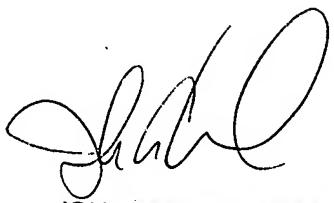
JMH (1/19/2005)



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